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"Coyteux"

SURGICAL GLEANINGS FROM ABROAD.

BY

L. COYTEUX PREVOST, M.D., of Ottawa.

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SURGICAL GLEANINGS FROM ABROAD.*

BY

L. COYTEUX PREVOST, M.D., of Ottawa.

The surgeon's mission is to relieve the sufferings of those who confide their health to his care and to save their lives when he can. So noble is this mission that we willingly lend to it a sacerdotal character, because, after all, life is a blessing; it is better to be than not to be, and next to existence, health is the most desirable thing we, mortals, could wish for. We lose both, owing to systematic disorders, the true nature of which is all the more obscure that the phenomena take place in the interior of organs full of mystery, inaccessible to our best means of investigation. The explanation of the physiological functions of the body has always been the aim of predilection of those engaged in the study of medical sciences. The field is infinite. Whatever may be the depth that science has reached, and at the very moment where we are preparing to congratulate ourselves for having, as we think, at last, discovered the explanation most eagerly looked for, our hopes are suddenly crushed by the unforseen appearance of labyrinths strewed with new problems. And very often these recent discoveries shed a new light upon the route we have just travelled over, showing us with striking evidence the falsity of the ideas of the day, and compelling us to destroy what our poor human mind had erected at the expense of such great labor and the solidity of which we were so proud. We must commence all over again. Bitterly taught by experience, we go to work with less pride but more wisdom. Gathering from the acquisitions of the past, the few shreds of truth rescued from the disaster, as that could not perish, we religiously collect them, as primers of hope for the future. Wiser, we shall hereafter multiply our means in the research of the unknown, scrutinizing the validity of conclusions too hastily deducted from delusive theories. Above all, we shall ask, every one engaged in the study of medical science, to make known to us the results of their own resarches. The synthesis of all these intellectual endeavours shall, hereafter, constitute the base of all individual work, which is doomed to remain sterile if it is isolated. In a word, the knowledge of all that is done around us, joined to our personal experience, is the *sine qua non* condition of all serious progress in surgery as well as in medicine. But medical literature in spite of, or, perhaps, owing to its richness, is unable to supply us with such momentous knowledge; we must go ourselves and see hear and learn what is

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said and done elsewhere. Unfortunately, exigencies of a large clientele and thousands of other obligations usually paralyse the liberty of the general practitioner. On the other hand, others, owing to the special nature of their occupations, enjoy more leisure. It belongs therefore to the latter to go and hunt up information and it is, besides, their duty to share the knowledge obtained with those who, in this respect, have not the same good fortune.

All this preamble, gentlemen, is merely and simply to tell you that I am here to-night, begging the favor of communicating to you some of the interesting facts I came across during the several excursions I have made amongst surgeons everywhere, but especially abroad.

The general impression I brought back from my trips, gentlemen, is the willingness with which nowadays the majority of surgeons resort to the knife in cases which were formerly relegated to the domain of timid temporisation or amenable to the general means of surgical therapeutics. The marvellous results obtained by the means of asepsis and antisepsis seem to justify the greatest daring. The peritoneal cavity has ceased to be the mysterious sanctuary which we always approached in trembling. We no longer wait until the stomach is the seat of a malignant affection to perform the resection of this viscus, and the success achieved by gastro-enterostomy in simple stricture of the pylorus has justified this courageous boldness. And Sclatter goes still further: he has removed the whole stomach itself, suturing afterwards the œsophagus to the duodenum. The patient lived, and what is more astonishing, the digestion was not only very little disturbed, but nitrogenous food itself did not seem to be aware of the fact that the organ entrusted with its metamorphosis existed no more. And, again, what would Durande say to-day, with his sovereign remedy for gall stone, could he witness with what facility we reach, knife in hand, the gall-bladder to cut open and extract the foreign body that it contains? The kidney, the spleen, nowadays, when they are in the way, we remove them, that is all. The intestine, we resect it by the yard as it were, the two ends are united, and the patient continues to live. And in gynæcology, what have we done within the last twenty years? And merely to determine the diagnosis, we do not hesitate to open the abdomen, an operation which, in spite of all that is said, we must still look upon as a defiance to the numerous and concealed enemies with which we are surrounded.

With regard to external surgical diseases, we do not inconvenience ourselves either. In anthrax, crucial incision had long ago taken the place of the classical poultice; to-day a great many surgeons, even at the onset of the disease, trace a parenthesis on each side of the evil and

remove it as they would do a simple tumor; and why not? Glands gorged with lymph in lymphadenitis, we scoop them out, it is more radical and more expeditious than to resort to hot fomentations or tincture of iodine. Inflamed joints which formerly we dared not approach but with the utmost respect, we tap them, incise them to-day, we cauterize their interior and the patients get well. In goitre, no more display of ointment or revulsive, we remove the gland. The enlarged prostate also is taken away after perhaps previous recourse to castration, while waiting to perform the radical operation.

Gentlemen, I have no intention of prolonging this enumeration, all I want to add is that lately, the majority of surgeons seem to have a tendency to repress the excess of this operative fever. Anyway, it is always the same thing, and history repeats itself. With the coming of the antiseptic era, there appeared an operative delirium which begins somewhat to fade away. The enthusiasm of the first days is abating, abuses are suppressed and the wisest show to us the path we must follow, narrowing, as it were, our means of action and focussing the operative indications taught by experience. I would not even be at all surprised that we would sooner or later fall into the opposite excess and that, fearing to do too much, we would remain behind the mark. This reflection comes to my mind in thinking of the passionate expression of the tendencies of those we agree to name the conservative surgeons. No doubt their aim is commendable, and moreover, we must confess that the results obtained in some cases seem to justify their ideas. But every one has not been so fortunate and very often, for instance, in presence of small uterine fibroid, has bitterly regretted having followed the advice of those who, in the name of conservation think it proper to abandon these cases to themselves. And again, for trying to be conservative, and for having neglected to remove the uterus in the course of double oöphorectomy, or else, for having simply resected an ovary instead of sacrificing it, I know of some who have experienced very keen remorse as a reward for their good intentions. But what I applaud above all with both hands, is the wise determination recently arrived at by a certain number of surgeons, and namely by Piquet and Febre, who caution us against attempting any surgical operation on hysterical or insane patients. Here, whatever may be the indication, as long as existence is not threatened, we must resist the temptation and abstain from all serious operative interference. And especially on the gynæcological ground, were I allowed to invoke my personal experience and to venture on advice, I would say: with those brave women, let the genitals alone, or else, if once you begin, you will never end. The whole genital system will be sacrificed piece-meal before you obtain the suppression of the painful symptoms.

Now, gentlemen, if you will kindly accompany me, let us pay together a short visit to New York, this incomparable metropolis, with its congregation of amiable and distinguished surgeons. Going, we shall stop a moment in Montreal, and shall visit Paris coming back. This itinerary is well worth another, is it not ?

There exists in Montreal a young institution which I desire to point out to your attention. It is a new medical association formed by a group of young French-Canadian physicians, the most of whom have terminated their studies in France, and who, since their return, have conscientiously continued to work and study. I know several of them personally, and all I can assure you is that some day you will hear of them. Every Thursday night they meet in one of the halls put at their disposal by the professors of Laval University, and there, under the chairmanship of a new president chosen from amongst themselves every week, they talk medicine, surgery, obstetrics, and bacteriology. Their meetings have especially a clinical character, the interesting cases met with in their practice being related, commented and thoroughly discussed. The reports of these remarkable evenings are published in *extenso* in periodical medical reviews, and really some of them are simply masterly. At one of their recent meetings, the everlasting subject of the operative indications in appendicitis was the order of the day. The meeting, that night, was presided over by one of their old professors and one of the most eminent surgeons in Montreal. Almost all members present, especially those who were doing some surgery, were in favor of an immediate operation in the great majority of cases, claiming that it was always unwise to let the patient run the risk of the contingent danger of temporisation. On the contrary, the president held an altogether different opinion, and squarely condemned appendicectomy as an operation almost in every case useless and very often harmful to the patient. The chief argument upon which rested his proposition was ever the same: He had seen and was still every day meeting with so many cases which had done well by medical therapeutic means alone, that it was causing the patient an unjustifiable risk, in opening the abdomen to remove the appendix.

Shall we ever agree upon this question so often and for such a long time debated ? yet, the whole thing seems to me very simple ; and if the adversaries are as deeply penetrated with the force of their arguments as I am of my own, I quite easily understand that we shall always follow parallel lines without any hope of ever coming together. Apart from a few rare exceptions, in which the urgency of operative treatment is generally admitted, almost all cases of appendicitis begin the same way and with the same symptoms, the cases which will favorably termi-

nate, and those which will end fatally. It is perfectly useless to rack our minds, we have no sure signs whatever, at the onset, by which we might surmise what the future keeps in store for us. "Let us wait," some might say, "it so frequently happens that everything passes off most naturally."

To my mind this is wrong. I am afraid to venture myself across a lake in a bark canoe; I had rather, in spite of rough roads, go around driving. "But, water is calm, the sky pure and bright, and besides," you might say, "I know lots of people who have crossed that way without accident."

I am quite aware of that, and it is not those who did it safely who have rendered me prudent, it is the others who were drowned, although the conditions were entirely similar and apparently as safe when they started. You cannot tell at what time of the crossing a gale may rise or a mere imprudence upset your frail boat. And, besides, since life itself is at stake, why not choose the safest route in spite of some inconvenience? For the country practitioner, away from large centres, it is another thing; let him run the risk. He has neither the practice, nor the modern arsenal required for this kind of operation, he is therefore justified in having recourse to the medical means at his disposal. But in a city, living in the vicinity of hospitals so well equipped and next door to trained surgeons, there should not be any hesitation; drive around the lake, do the operation or ask somebody else to do it for you, provided that the disease is at *the very onset*; and I insist upon that point. Such is, besides, the practice followed by the New York surgeons, who all believe that it is not prudent to leave a patient suffering from appendicitis, at the mercy of a mere medical treatment. They differ from one another only with regard to the variety of operative details which are as numerous as the surgeons themselves. I saw several of them at work and gathered information which is not devoid of interest. McBurney, for instance, whom I may call the father of operators for appendicitis, insists upon the necessity of making an oblique incision, in order to avoid the section of the nerves which traverse the abdomen and supply movement to the rectus muscle. Otherwise the patient will, later on, show a sort of muscular weakness on the operated side which, in the standing position, allows the abdomen to sag out on the right of the median line.

Morris, of the *Post-Graduate*, lays a great stress upon the necessity of making the smallest incision possible, one inch and a half, for example. I saw him make even only a simple button-hole, in cutting with scissors the base of a fold made by raising the skin, instead of dividing, like others, the integuments with a knife.

Lloyd also is much in favor of small incisions when operating for appendicitis. Why, may I ask you, resort to such exaggeration ?

I recollect having seen once an operator painfully labouring through one of these small openings. The operation had been long and difficult and it had proved necessary, in looking for the appendix, to pull out quite a good length of the large intestine. When it came to reinstate the bowel in the abdomen, the constriction produced by the incision had created exactly the conditions of strangulated hernia, and it was with the greatest trouble that the surgeon finally succeeded in reducing the gut, congested, bluish, enormously tumefied.

Gerster, of the Mount Sinai Hospital, on the contrary, makes an incision three or four inches long. He wants to see what he is doing, and he is right. He does not even feel the least uneasiness about the possibility or probability of future hernia, and I saw in his wards, three patients recently operated, who already during their convalescene had unmistakable hernia. "What difference does it make ?" said he ; "what I want, above all, is to save the life of my patients; the hernia we shall cure later on." I must add, however, that the cases I am alluding to were suppurative appendicitis which had required extensive drainage. In those cases with abscess, the majority of surgeons to-day are satisfied with evacuating the purulent collection, washing out the sac or wiping it out, filling it afterwards with large strips of iodoform gauze. They do not lose time in searching for the appendix unless the latter readily presents itself under the hand of the operator, in which case, of course, it is removed. If, compelled by circumstances, the removal of the appendix is decided, this is done only after the whole cavity has been surrounded with a real wall of iodoform gauze to protect entirely the peritoneal cavity from all contamination.

One of the most original things I saw in New York is the peculiar way that Professor Edebohls has adopted to do away with the appendix in some cases. He does not perform appendectomy, but invaginates the whole organ into the cæcum. After having looked for and found the appendix, he ligatures the meso down to the intestine and trims carefully the whole appendix from all adipose tissue which adheres to it. The assistant then grasps the cæcum between the index and the thumb of both hands on each side of the appendix. The operator, with a thumb forceps, carefully invaginates the appendix, beginning at the base and proceeding alternately on one side and then the other. Little by little, the appendix is coaxed in and finally disappears entirely. It can be felt, then, through the walls of the cæcum, but it is telescoped, as it were, serous against serous. By gradual pressure, he causes it to sink in more and more until it is entirely turned inside out like the finger of a glove, the inside of the appendix being in contact with the

intestinal mucous membrane. He finally sutures the opening left in the cæcum by the invaginated appendix. The latter, it seems, passes in the stools in eight or ten days. I need not add that this process is not applicable to perforated or gangrenous appendicitis.

I saw also Edebohls remove the appendix from behind in the course of nephrorrhaphy. You know that this distinguished surgeon believes with great conviction that salpyngitis, appendicitis, and floating kidney constitute a pathological triad which is almost always the indication for a triple surgical operation. To remove the appendix by the lumbar region is not an operation of daily occurrence. Edebohls has attempted it ten times already. Eight times he succeeded in finding the appendix and invaginated it according to the method I have just described, but twice he failed to find the appendix, which shows that it is quite a difficult operation to undertake.

Since I have the honor of speaking of Edebohls, I cannot resist the desire of giving you a description of his method of doing nephrorrhaphy, an operation which he has done alone, I believe, oftener than all the other surgeons in New York united.

The patient lies flat on her stomach, the legs flexed and the feet, heel upwards, held by the stirrups of the operating table you know. The abdomen rests on a cylindrical rubber air-cushion which Edebohls has devised especially for this kind of operation. It is about eighteen inches long and eight inches in diameter when inflated. An incision as long as possible is carried midway between the vertebral column and the lateral line of the body, from the border of the twelfth rib to the ilium. The external edge of the erector spinæ may be used as landmark. The knife progressing divides a few fibres of the latissimus dorsi, cuts a fascia and soon falls on the quadratus lumborum, which is denuded of its aponeurosis all along its internal border. The fatty capsule then is seen and the kidney may be felt already at the bottom of the wound. Between two forceps the adipose capsule is incised and the fat at once protrudes through the incision. The fibrous lamina is incised along the whole length of the convexity of the kidney, after which it is drawn out of the wound as far as it will go and the redundency of the fat sac is cut off on either side, taking care not to open the peritoneum at the lower pole of the kidney. The kidney is before our eyes. If it is very movable, it is hooked up with the fingers and brought entirely out of the abdomen. Should we experience any difficulty, then the ingenious action of the cushion is brought into play. In pulling downwards on the legs of the patient, the cushion quits the inferior part of the abdomen where it was placed at the beginning of the operation and rolls up towards the diaphragm, and by its

pressure crowds up the viscera and causes the kidney to almost pop out of the abdominal incision.

A small puncture is then made in the capsula propria on the convexity of the organ, in the median line near the lower pole. Through this opening, the capsula propria is divided downwards and upwards, upon the director. Catching the edge of the incised capsule with a thumb-forceps, the kidney is denuded with the handle of the scalpel on either side of the incision until about one inch of the kidney substance has been exposed all along the incision. The stripped off capsula propria is not removed, but is doubled backwards upon the still adherent portion like the lapel of a coat. At the time of the operation, there is sometimes quite free bleeding, but it is of little consequence. A small curved needle, threaded with fine catgut, is thrust, beginning by the external side, through the layers of the doubled capsula propria, passes across the substance of the kidney and comes out through the double layers of the capsule on the internal side. Three such sutures are used, one inch apart, one in the middle, one above and one below. The kidney is then allowed to fall back in the abdomen, this being done by rolling back the cushion to its former place. Then one end of the suture is armed with a needle which carries the thread through the substance of the quadratus lumborum and secured with a forceps. The same needle is threaded with the other end of the suture and thrust through the muscles on the external side and a forceps again applied. The same thing is done for the three sutures. The edges of the muscles are approximated over the kidney with a continuous suture and then only, the three former sutures are tied over the united muscles. But in tying these deep sutures, care must be exercised not to draw them too tightly, as they readily cut the friable kidney substance. The skin is united by a subcuticular suture and the dressing applied.

The patient is kept upon the back for three weeks and then allowed to sit up and go about as she pleases.

I showed you, gentlemen, at the last meeting of our society, with what disregard I treated the so much dreaded caustic and escharotic properties of pure carbolic acid, as long as I had near at hand some alcohol to neutralize its effects. It is to Dr. Phelps that I owe what I have learnt upon this subject.

You all know by reputation Dr. A. M. Phelps, who occupies such an eminent position amongst American surgeons. At a meeting of the Orthopedic Association held in New York last June, Dr. Phelps read a communication upon the treatment of erysipelas and purulent arthritis by pure carbolic acid. The importance of the facts related in his paper is such that I beg the permission to bring it to your knowledge.

He stated that Dr. Seneca Powell, of the New York Post-Graduate Medical School and Hospital, had discovered that alcohol was an absolute specific against the corroding effects of carbolic acid, and that he, Dr. Powell, had for years been treating abscesses by the method which Dr. Phelps now described and followed in the treatment of purulent and tuberculous joints. He reported a large number of cases of erysipelas treated at the City Hospital and presented the temperature charts of each case, which showed that immediately following the application of carbolic acid the temperature fell within six hours in many cases to normal, and in all of them the record showed a fall of temperature of from one to three degrees at each application, and the patients were all convalescent within four days.

Taking into consideration that the class of cases treated were of the severest type, sent to the hospital from other institutions of the city, and the results in cases treated by the orthodox methods, we must concede that this plan of treatment is a valuable one and an innovation which should be adopted by the entire profession. Since the introduction of this plan of treatment at the City Hospital, there had been no deaths from erysipelas so treated, and the doctor stated that erysipelas cases, following surgical operation, were now no longer transferred from the surgical ward to the erysipelas pavilion, but were immediately treated with carbolic acid and each case had been aborted.

The method of application is to apply to a well-cleansed surface of disease with a pledget of cotton and a pair of forceps, pure carbolic acid. When the skin begins to turn white and considerable smarting is present, alcohol is freely used to neutralize and wash away all of the acid. The parts then are simply covered with absorbent cotton and a bandage. Any extension of the redness is at once treated in a similar manner. No constitutional remedies were used in any of the cases.

In regard to joints, they are freely laid open and washed out with a weak solution of carbolic acid, two per cent. Towels saturated with alcohol are placed around the area of the operation and the entire joint swabbed out and injected with pure carbolic acid. After *two minutes* the joint is freely and carefully washed out with pure alcohol, and finally with a two per cent. solution of carbolic acid.

In smaller joints a half-inch drainage tube is employed, which is usually removed at the end of one week, depending entirely upon the condition of the joints. In hip joint excision a drainage tube from one inch to one inch and a half, and in the adult even larger, of glass or pure rubber, is inserted down the acetabulum. Subsequent applications of pure carbolic acid can be made through the large tubes to diseased areas until the granulation forces the tube out. He also reported a large number of cases of hip joint disease treated by this method which

had been discharged from the hospital within three weeks from the time of operation where perforation of pelvis had occurred and the head of the bone entirely destroyed. Such cases heretofore he had excised, and they had remained in the hospital from four months to a year.

The doctor is of the opinion that alcohol either neutralized the carbolic acid, or else acts mechanically, washing it away after the desired effect has been maintained. He also believes that strong acid unites with the albuminoids of the skin or tissues, forming new compounds, which are absorbed through the lymphatics destroying germ life.

His reason for believing the last statement, is that pure carbolic acid cannot be absorbed, but after application of pure carbolic in erysipelas and in septic and tubercular processes, the lymphatics begin immediately to be painless, the tissues in the area of disease to shrink and the pathogenic process immediately subsides. This must be due to a new compound which is formed by the application of pure carbolic acid.

I wish I could also, gentlemen, show you with what assurance and what brilliancy Dr. Phelps straightens, with the osteoclast, those bow-legged children whom we used to treat so willingly, formerly, by osteotomy; but it would be necessary to exhibit, at the same time, the instrument he uses. I shall do it later on when I have the instrument at my disposal.

Cancerous affections over there, as well as on this side, keep the surgeons in total despair. The unmerciful recurrences which so stubbornly and so frequently occur, ever after the most radical treatment, almost cause us to doubt whether we shall ever succeed in victoriously combating this formidable plague by surgical means. Indeed, we are anxiously longing for the time when bacteriology shall have, firmly secured, surrendered to us the germ of this disease or the vaccine which will shelter humanity from its deadly blows. You know through how many successive phases has passed, for example, the treatment of cancer of the breast. We thought sufficient, at first, to remove the tumor alone; the evil came back in the gland. The whole breast then was sacrificed every time; the cancer would spring up again in the axillary glands. The latter had to be carefully scooped out at every operation, even when they seemed to be perfectly sound; the hydra would appear in the aponeurosis of the thoracic muscles. Finally, Halsted deemed it indispensable to cut down, at a stroke, the seven heads of the monster, and proposed a truly herculean operation, advising the removal of everything at once: tumor, mamma, axillary and subclavian glands, aponeurosis and pectoral muscles. I saw McBurney perform that operation at Roosevelt; it took him one hour and a half to do it. According to him, this is the only operation which allowed

his patients to remain, two, three and four years without any recurrence of the disease.

Gynæcologists are a pre to the same discouragement, with regard to the cancer of the uterus. At first, they merely amputated the cervix, and you remember surely with what talent Verneuil upheld this operation against those who already were advising total hysterectomy, owing to the frequent recurrences they had met after simple amputation of the cervix. Unfortunately, vaginal hysterectomy itself was so frequently found insufficient that gynæcologists lately thought it better to follow Halsted's example in mammary carcinoma. They proclaim that the only rational and efficacious operation is to remove the uterus by the abdomen in order to dig down into the pelvis and extirpate all the glands and as much as possible of the broad ligaments and parametric tissues. What will be the future results of this extensive mutilation? We cannot tell. However, I am very much afraid that it may share the fate of the other operations which it boasts of advantageously replacing. I quite understand that it might be possible to scoop out all the pelvic glands in which the uterine lymphatics end, but how can we extirpate the glands which receive the lymphatics of the ovaries, situated, as they are, away up almost on the level with the diaphragm?

Finally, cancer of the rectum has so far defied all surgical treatment directed against it. Kraske has surely made a step forward but the number of cases amenable to his method is also very limited. An English surgeon thought he could go further, and has given lately a description of a process which permits us to reach the limits of the disease as far as the sigmoid flexure. Availing himself of Kraske's incision, he detaches the gut, gradually cutting the meso-rectum, and doing hæmostasis step by step. He pulls out as much as eight or ten inches of the intestine, which he resects, uniting afterwards the sound portion to the external opening. This may, perhaps, appear quite simple. You might try to do it. Still I believe that such an operation has some emotion in store for the operator who undertakes it.

The radical cure for hernia is now done everywhere. I saw it performed at the Mount Sinai Hospital by Gerster; at the German hospital by Willie Meyer; at St. Francis Hospital by Edebohls; at the Post-Graduate by de Garmo; and in Paris by Lucas-Championniere. All, except the latter, have adopted Bassini's operation. Lucas-Championniere operates differently and does not believe in the absolute necessity of uniting with such care Poupart's ligament to the conjoint tendon. After the section of the sac, he brings together the muscular lips of the wound and causes them to side one upon the other by a special disposition of the sutures, and lays the cord between this muscu-

lar layer and the integuments. He contends that this mode of operating is the best safeguard against the recurrence of the hernia.

The most striking feature which attracts the visitor's attention in New York is the excellence of the operative technique, and the irreproachable way with which the rules of asepsis and antisepsis are carried out. I willingly couple these two terms side by side, because, to my mind, it is impossible to adopt one method to the exclusion of the other. Whenever sterilisation can be obtained by heat, naturally this is the means we must resort to; but for all parts of the body which cannot be submitted to the action of a high temperature, antiseptics constitute the indispensable complement to the mechanical action of washing and scrubbing. However, I know some surgeons, namely, Outerbridge, who never use any antiseptic whatever, a fact which did not prevent this surgeon doing his hundredth laparotomy last year without accident. In some hospitals, surgeons and assistants don rubber or cotton gloves in operating. Others cover their hair with a bonnet, and finally, some imprison their whiskers in a wide strip of gauze soaked in sublimate solution and tied behind their head. But every one of them is helped by one or more assistants accustomed to work with them and who, conversant with the habits of the operator, can guess his wants and supply what is required without being asked. This "team-working" is, to my mind, the *sine qua non* of a regular and rapid operation. I say rapid, but I do not mean that we must aim at those ridiculous records which some surgeons proudly boast of, claiming, for instance, that they usually remove a uterus in eight, ten or twelve minutes. No; still it is absolutely important that the patient should remain as shortly as possible under the influence of the anæsthetic and those operations lasting two hours or more should no more take place in the hands of a surgeon who knows his business and is surrounded by competent and skilful assistants.

They also try to-day to do abdominal sections with as few instruments as possible, and I saw several laparotomies performed with only one scalpel, one pair of scissors and a few hæmostatic forceps; always with the view of diminishing as much as possible all chances of infraction of the exigencies of scrupulous antisepsis.

There is no more discussion now about the advantages of Trendelenburg position which is adopted by all surgeons, especially when operating on the internal genital organs of the woman. It is owing to this position, which carries the intestinal mass away from the area of operation and allows us to thoroughly see the whole of the pelvis, that abdominal hysterectomy has become just as common an operation as formerly was ovariotomy, and which permits our freeing and removing almost without danger the appendages gorged with pus.

The size and situation of the abdominal incision are still a source of

dispute in certain places. A great many surgeons claim that this incision should be as small as possible. Some contend that it should be made through the muscles; others stick to the old way, the linea alba. The wisest, in my humble opinion, are those who divide the tissues on the mediam line, cutting right down to the peritoneum without minding what they go through.

Some discussion about the closure of the abdomen. Almost every one uses three or four layers of sutures, but several and amongst them, very prominent men, such as Joseph Price, of Philadelphia, and Outerbridge of New York, still suture the incision through and through. I have already stated that the latter has recently done one hundred abdominal sections without accident, having very seldom, if ever, heard of hernia or suppuration. These extraordinary results, if they do not prove the superiority of his method, seem to show, at any rate, that it is at least as good as any other. He attributes the absence of post-operative hernia in his cases to the scrupulous care with which he endeavours to catch the peritoneal lips of the incision as near their edges as possible, in order to avoid creating an infundibulum, which later on might produce a tendency to eventration. Post-operative hernia, anyway, is becoming more and more rare in the hands of all surgeons, and I believe that this fact must be attributed to the gradual disappearance of abdominal drainage to which we have now recourse only in exceptional cases. Glass drainage tubes belong hereafter to the domain of history. Rubber tubes are going also. Abdominal drainage with strips of iodoform gauze, seem to have a tendency to follow the others, and in gynæcology, whenever a suspicious operation or some considerable oozing compels us to resort to drainage, it is through a vaginal incision that it is done, it is just as efficacious and surely more rational. With the disappearance of the abdominal drain, when we shall have found the means of avoiding altogether the suppuration of the abdominal wound in every case, we shall then very seldom hear of post-operative hernia. Yes, but here it is. Unfortunately that suppuration of the incision, those stitch abscesses, are still the nightmare of abdominal surgery. We do not know yet how to shelter ourselves against the misdeeds of staphylococcus albus which is securely concealed in the deep layers of the epidermis. However, I believe that this foe is quite inoffensive in the majority of cases, and that it annoys us only when we supply him with a medium of culture favorable to his development. This medium of culture is the moisture of the wound. I have studied this question with much care and have come to the conclusion that it is absolutely necessary in closing the abdomen, to pay the utmost attention to hæmostasis, putting a ligature upon all bleeding points. I am convinced that we are wrong in so frequently incriminating the lack of sterilisation of the sutures used when we meet with suppuration of the wound ; hence all those

different processes to sterilize ligatures and especially the catgut. A great many operators until very lately had even discarded altogether this beautiful material, owing to its ordinary unreliable sterilisation. However, this unjust ostracism shows more and more a tendency to disappear, and permanent sutures left in the midst of the tissues, are not meeting with the same favor as before. For instance, with the exception of Emmet, I do not know a single operator in New York who still uses silver wire, almost universally used five or six years ago, to suture the abdominal wound, and especially in performing trachelorraphy. Furthermore, we wonder whether silkworm gut itself is not beginning to undergo the same fate; I mean as permanent suture in the reunion of aponeurosis, because it is still quite commonly employed for the suture of the skin. Even for this, the subcutaneous suture seems to become exceedingly popular. In fact, it is a perfect suture, aesthetically speaking; it has but the inconvenience of all continuous sutures: if it gets infected at one end, the whole suture is generally doomed. Edebohls has remained faithful to catgut sterilized at the temperature of 212° in boiling alcohol under pressure. He makes use of the finest kind, 0 or 00, and has always had with it excellent results. A great many are now using catgut sterilized by its immersion in a 4 per cent. solution of formaldehyde during 48 hours. I have been using myself, for the last year, catgut prepared according to this method, which I consider an ideal one because it allows of our sterilizing the catgut absolutely like all other ligatures, that is, in keeping it as long as we like simply in boiling water.

There are certainly, gentlemen, a great many questions of details, *e.g.*, preparation of the operating room, qualification of the assistants, size and situation of the line of incision, position of the patient, choice and sterilization of ligatures and dressings, etc., etc.; and I am far from pretending that we should disregard all these important precautions. But it would be a deep error to believe that here only lies the secret of success in the formidable operations of modern surgery. It suffices to see, once, our masters at work, to remain convinced that something else is required to safely venture ourselves on such grounds. In spite of the display of all the means which the antiseptic arsenal contains, it is criminal, it seems to me, to plough the entrails of a patient, knife in hand, without possessing the coolness, the tact, the intelligence and the anatomical and surgical knowledge which constitute a true surgeon. It is only after a special and deep study, after the frequenting of the amphitheatre and hospitals, and the attentive contemplation of the work of our masters, that any one is allowed to legitimately hazard himself in that surprise-box which is called the abdomen. To cut out and extirpate a tumor with more or less skill, to remove more or less diseased organs, and afterwards to victoriously rub our hands together

with satisfaction over the operation, is a very poor result after all, if the patients dies in a few days, or if later she continues to suffer from the same symptoms she was complaining of before the operation. A great many seem to forget that the surgeon's supreme desire, when he takes the knife, should be the relief of the suffering being who begs his assistance. To reach this aim, more than one issue has to be considered in the majority of cases, and frequently a too hasty determination prepares for its author very bitter remorse. In spite of its progress, gentlemen, the philosopher's stone has not been found yet in surgery, and if the most eminent men, with incomparable richness of materials at their disposal, trod that path with so much shrewdness and caution, how much more necessary is it for less privileged others to do all in their power to acquire the qualifications indispensable to their guidance. Above all, no human consideration should ever make us forget the old and charitable axiom: "*Primo non nocere.*" One must have sometimes the courage of confessing that there is a thing or two that he does not know or that he is not able to do properly. Pride or personal interest should never be put in the balance with the interest of those who confide their life or their health to our care. The fact of being able to terminate more or less successfully an operation perhaps sometimes undertaken at random, must not be the climax of our ambition, and every honest member of our profession should always bear in mind that his primordial duty is to eradicate an evil, heal up an injury, and relieve suffering.

I am sorry, gentlemen, that the limits I imposed upon myself in this paper do not allow my enjoying the pleasure to prolong in your company this incursion into the vast and so interesting field of modern surgery. But I would really feel much humiliated if, owing to the late hour, our worthy president found himself compelled to make me stop. Therefore, I shall end here, but not before I have said a word concerning a question which still continues to impassion all gynæcologists, although the discussion has begun somewhat to abate.

During the summer, it was my good fortune to pay a short visit to Paris, where I had the pleasure of meeting the charming man of whom you have surely frequently heard, since he is one of the lights of French gynæcology, I mean Paul Segond. Jacob of Bruxelles, Delageniere of the Mans, Laroyenne of Lyon, Doyen of Reims, Bouilly, Doleris, Richelot, Pozzi, Segond in Paris are as many constellations shining with the most resplendent brightness in the firmament of French surgery. Until 1896, a contest, international as it were, was engaged in between the French and American gynæcologists, in order to decide by which route was preferable to remove the uterus or the diseased appendages. The French were in favor of the vaginal and the Americans the abdominal route, and on both sides irresistible arguments were

brought forward. Both were combating in the light of experience. And surely, when one has performed an operation 400, 500, 600 times, he is entitled, I fancy, to give his opinion upon the matter. And such was the number of vaginal hysterectomies that some of the French surgeons had to compose their personal statistics. The Americans, if they had not, like the French, the same experience in vaginal hysterectomy, on the other hand, had just as frequently dealt with similar pathological conditions by the abdominal route, which, according to them, was undoubtedly the better way.

Jacob of Bruxelles, in 1895, thought he would cross the ocean, armed with all his instruments, and pay the United States a short surgical visit to convince the stubborn Yankees of the excellence of his method. However, the results of his endeavours were nil ; the Americans' convictions remained unshaken, and Jacob went back to his country, without having himself modified his own opinion.

Twelve months afterwards, Paul Segond followed the example of Jacob, and came to the United States, accompanied by his assistant, Dr. Chauveau. I was fortunate enough to meet both in New York at the time of the meeting of the American Gynæcological Congress. Every one was anxious to see the great French surgeon at work, and every day, in one hospital or another, patients were presented, upon whom he performed vaginal hysterectomy. His wonderful dexterity amazed everybody. "Indeed," said they, "when one operates with such ability it is not surprising that he should have a special predilection for vaginal hysterectomy."

Nevertheless, the Americans returned the politeness, and operated through the abdomen in the presence of Segond. Do you know what the result was ? Segond returned to France, at first with shaken ideas, but very soon convinced that the truth lay on this side of the Atlantic, and at a meeting of the surgical society held in Paris in 1897, he made a characteristic profession of faith contained in the following title of a paper published in the Review of Gynæcology and Surgery: "On total abdominal hysterectomy in the removal of large fibroids and on the treatment of pelvic suppuration. Considerations upon its technique and upon the *superiority* of the American method."

I have nothing to add to this significant and eloquent declaration.

Must we conclude that vaginal hysterectomy is doomed and must hereafter always give precedence to abdominal hysterectomy ? No ; but the field of its indications has greatly diminished within the last few years, especially ever since that, owing to Trendelenburg position and the easy and effective protection of intestinal coils by antiseptic pads, we are allowed almost in every case to extirpate appendages full of pus, with hardly any risk of contaminating the peritoneal cavity. The results of the discussion have permitted the surgeons to render more precise the indications for the operation and to keep it together upon the ground which is suitable to it and where its excellence remains indisputable.